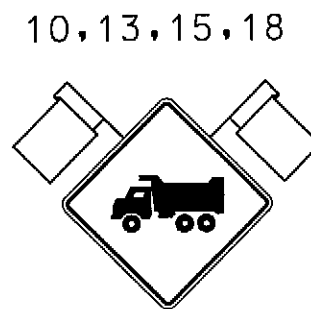


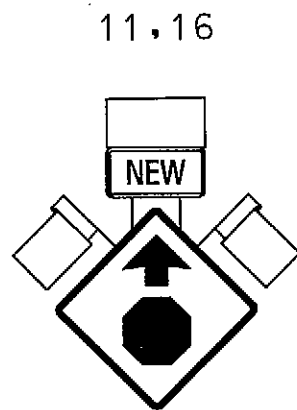
### PROPOSED SIGNS



W20-1  
(48" x 48")  
Black on  
Fluorescent  
Orange



W11-10(1)  
(48" x 48")  
Black on  
Fluorescent  
Orange  
(Flags for Ground  
Mount Use Only)

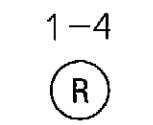


W3-1a  
(48" x 48")

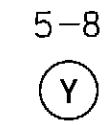


R1-1  
(48" x 48")

### PROPOSED SIGNALS



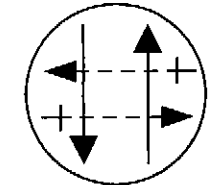
12"  
L.E.D.



12"  
L.E.D.

### PHASING

NORMAL  
OPERATION



### PROJECT DESCRIPTION

#### GENERAL

THIS PROJECT INVOLVES THE INSTALLATION OF AN INTERSECTION CONTROL BEACON (ICB) AT THE INTERSECTION OF CLEMSONVILLE RD AT LEHIGH CEMENT CROSSING IN FREDERICK COUNTY.

#### INTERSECTION OPERATION

A CONTROLLER HOUSED IN A POLE MOUNTED CABINET SHALL BE INSTALLED AT THIS LOCATION.

THE INTERSECTION WILL OPERATE IN A FLASHING OPERATION. FL/R DISPLAY FOR CLEMSONVILLE RD AND FL/Y DISPLAY FOR LEHIGH CEMENT CROSSING.

#### SPECIAL NOTES

1. ALL MATERIAL AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH THE MOST RECENT MD-SHA STANDARDS AND METHODS.

2. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

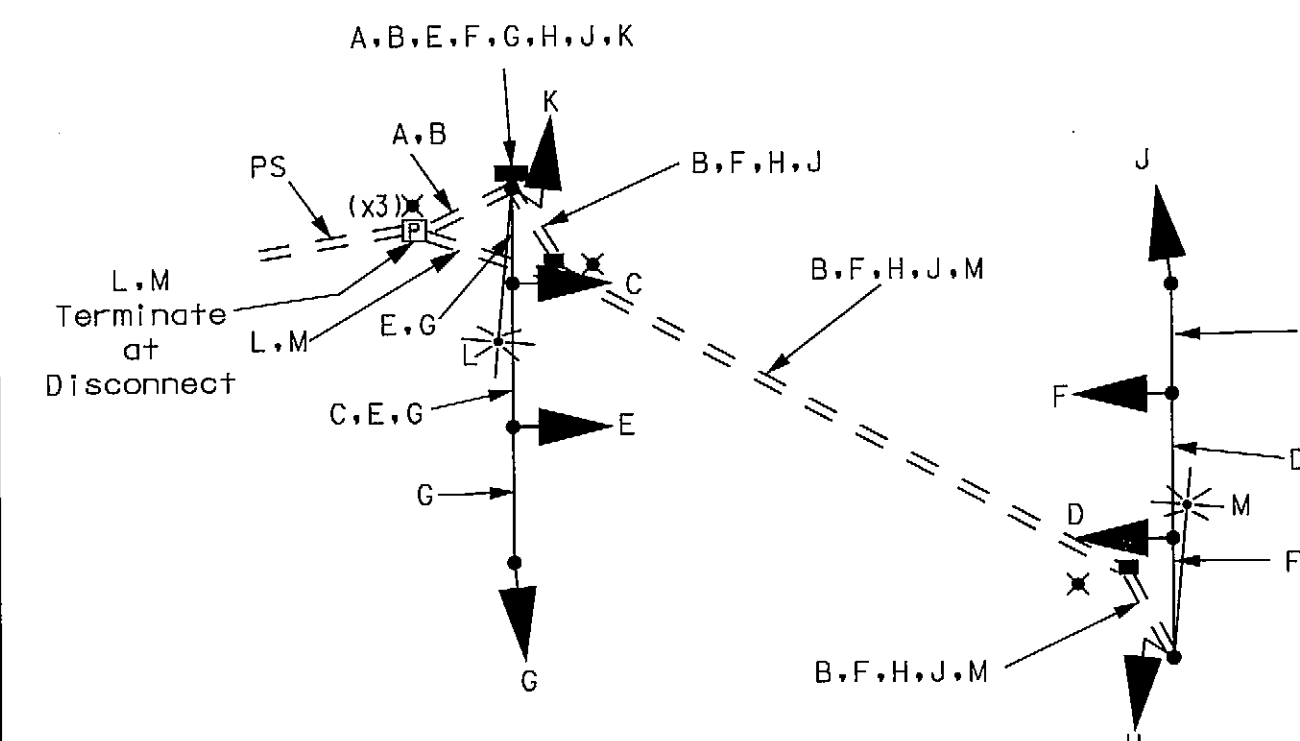
#### PROJECT CONTACTS:

MR. KURT DEERY - PROJECT MANAGER  
Environmental Engineer  
Lehigh Cement Company  
675 Quaker Hill Road  
Union Bridge, MD 21791  
(Office) 410-386-1229  
(Fax) 410-386-1296

EMERGENCY CONTACT  
FOR TRAFFIC SIGNAL TROUBLE  
Lehigh Central Controls  
410-386-1225

THE POWER COMPANY REPRESENTATIVE IS:  
ALLEGHENY POWER COMPANY  
LUTHER CROMER  
1-800-ALLEGHENY (1-800-255-3443)  
WMS# 1424410

### Wiring Diagram



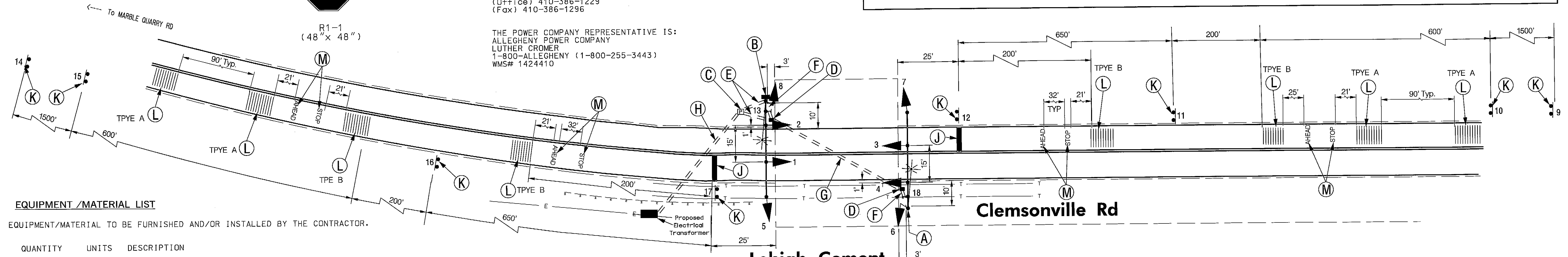
### Phase Chart

1	2	3	4	5	6	7	8
(R)	(R)	(R)	(R)	(Y)	(Y)	(Y)	(Y)

NORMAL OPERATION	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/Y	FL/Y
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#### KEY

- A } 1-CONDUCTOR (NO. 8 A.W.G.)  
(3 PIECES) FOR TRAFFIC SIGNAL  
ELECTRICAL SERVICE
- B } BARE COPPER GROUND  
WIRE (NO. 6 A.W.G.)
- C } 5-CONDUCTOR ELECTRICAL  
CABLE (NO. 14 A.W.G.)
- D } 2-CONDUCTOR TRAY  
CABLE (NO. 12 A.W.G.)
- E } PROPOSED UNDERGROUND  
ELECTRICAL SERVICE BY  
ALLEGHENY POWER
- F } PROPOSED GROUNDING ROD



### EQUIPMENT / MATERIAL LIST

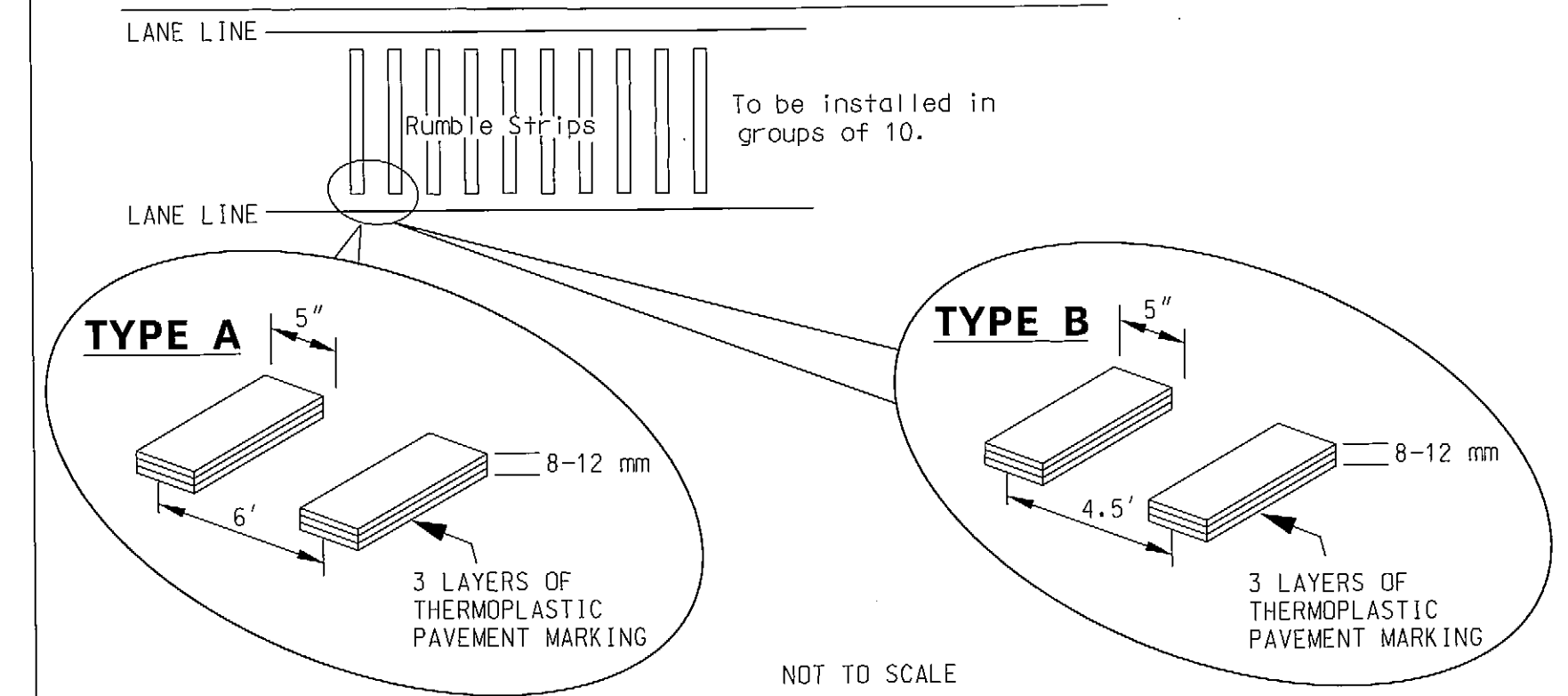
EQUIPMENT/MATERIAL TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

QUANTITY	UNITS	DESCRIPTION
LUMP SUM	LS	MAINTENANCE OF TRAFFIC
LUMP SUM	LS	MOBILIZATION
2	EA	27 FT. STEEL MAST ARM POLE WITH 38 FT. MAST ARM
1	EA	STANDARD S.H.A. TRAFFIC SIGNAL FLASHER, POLE MOUNTED NEMA 5 CABINET
2	EA	15 FT. LUMINAIRE ARM
2	EA	250 W HPS LUMINAIRE
8	EA	12 IN. 1-SECTION LED SIGNAL HEAD - MAST ARM MOUNT
2	EA	48 IN. X 48 IN. R1-1 SIGN - GROUND MOUNT
2	EA	48 IN. X 48 IN. W11-10(1) WARNING SIGN - GROUND MOUNT
2	EA	48 IN. X 48 IN. W11-10(1) WARNING SIGN - MAST ARM MOUNT
2	EA	48 IN. X 48 IN. W3-1A WARNING SIGN - GROUND MOUNT
2	EA	48 IN. X 48 IN. W20-1 WARNING SIGN - GROUND MOUNT
384	LF	4 IN. X 6 IN. WOOD SIGN SUPPORTS
1	CY	TEST PIT EXCAVATION
2	EA	HANDHOLE
50	LF	1-CONDUCTOR CABLE (NO. 8 AWG)
205	LF	2-CONDUCTOR TRAY CABLE (NO. 12 AWG)
620	LF	5-CONDUCTOR CABLE (NO. 14 AWG)
105	LF	BARE COPPER GROUND WIRE (NO. 6 AWG)
25	LF	2 IN. PVC CONDUIT [SCHEDULE 80] - TRENCHED
20	LF	3 IN. PVC CONDUIT [SCHEDULE 80] - TRENCHED
115	LF	4 IN. PVC CONDUIT [SCHEDULE 80] - BORED
6	CY	CONCRETE FOUNDATION FOR TRAFFIC SIGNAL EQUIPMENT
5	EA	GROUND ROD - 3/4 IN. X 10 FT. LENGTH
1	EA	CONTROL & DISTRIBUTION EQUIPMENT FOR ELECTRICAL SERVICE
25	LF	24 IN. WHITE THERMOPLASTIC PAVEMENT MARKING - STOP LINE
2675	LF	5 IN. WHITE THERMOPLASTIC PAVEMENT MARKING - RUMBLE STRIPS
4	EA	THERMOPLASTIC PAVEMENT MARKING SYMBOL - WHITE "STOP"
4	EA	THERMOPLASTIC PAVEMENT MARKING SYMBOL - WHITE "AHEAD"

### CONSTRUCTION DETAILS

- A. INSTALL 27 FT. STEEL MAST ARM POLE WITH 38 FT. MAST ARM, SIGNAL HEADS, SIGN, 15 FT. LUMINAIRE ARM, AND 250 W HPS LUMINAIRE (NOTE: ONE 3 IN. PVC SCHEDULE 80 CONDUIT BEND).
- B. INSTALL 27 FT. STEEL MAST ARM POLE WITH 38 FT. MAST ARM, SIGNAL HEADS, SIGN, 15 FT. LUMINAIRE ARM, 250 W HPS LUMINAIRE, NEMA SIZE 5 POLE MOUNTED CABINET, AND CONTROLLER. (NOTE: ONE 3 IN. PVC SCHEDULE 80 CONDUIT BEND AND ONE 2 IN. PVC SCHEDULE 80 CONDUIT BEND).
- C. INSTALL METERED SERVICE PEDESTAL FOR UNDERGROUND ELECTRICAL SERVICE.
- D. INSTALL HANDHOLE.
- E. INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- F. INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- G. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED.
- H. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED WITH A PULL STRING TO BASE OF ALLEGHENY POWER ELECTRICAL TRANSFORMER.
- J. INSTALL 24 IN. WIDE HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.
- K. INSTALL GROUND MOUNTED SIGN.
- L. INSTALL 5 IN. WIDE THERMOPLASTIC PAVEMENT MARKING THREE (3) LAYERS THICK FOR RUMBLE STRIP [SEE RUMBLE STRIP DETAIL].
- M. INSTALL THERMOPLASTIC PAVEMENT MARKING SYMBOL AS SHOWN.

### RUMBLE STRIP DETAIL



### GENERAL NOTES

1. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
2. PAVEMENT MARKINGS DETAILED ARE PROPOSED AND ARE TO BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH MD-SHA STANDARDS. ALL OTHER PAVEMENT MARKINGS ARE TO BE CONSIDERED AS EXISTING.
3. GEOMETRICS SHALL BE CONFIRMED PRIOR TO THE INSTALLATION OF SIGNAL EQUIPMENT. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS. HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
4. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC AND ARE NOT TO BE CONSIDERED COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL EQUIPMENT WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE PROJECT ENGINEER IMMEDIATELY.

### NOTE:

Site Project Manager shall ensure that when the truck crossing is not in use, Type III barricades shall be in place as per Figure 6H-14 of the MUTCD



GEOMETRIC LEGEND
EXISTING
PROPOSED
UTILITY LEGEND
SD - STORM DRAIN
G - GAS MAIN
W - WATER MAIN
S - SEWER MAIN
E - ELECTRIC CABLES
A - AERIAL CABLES
T - TELEPHONE CABLES
F - FIBER-OPTIC

<b>SHA</b>	STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION OFFICE OF TRAFFIC & SAFETY TRAFFIC ENGINEERING DESIGN DIVISION
	CLEMSONVILLE ROAD AT LEHIGH CEMENT CROSSING UNION BRIDGE, MD

APPROVALS	REVISIONS
DESIGNED BY: J. DIRNDORFER DRAWN BY: J. DIRNDORFER CHECKED BY: J. DIRNDORFER F.A.P. NO.: TS NO. 4751 DRAWING SG-01 OF 01 SHEET NO. 1 OF 1	

TRAFFIC SIGNAL PLAN
SCALE: 1" = 20'. DATE: MARCH 24, 2010. CONTRACT NO.: DESIGNED BY: J. DIRNDORFER. COUNTY: FREDERICK DRAWN BY: J. DIRNDORFER. LOGMILE: NA CHECKED BY: J. DIRNDORFER. TMS NO.: K319 F.A.P. NO.: NA. TOO NO.: NA

PLOTTED: Friday, May 14, 2010 AT 02:52 PM  
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